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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,506	04/15/2004	Ronald L. Boggs	BLL-0327	8576

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EXAMINER	
MAHMOUDZADEH, NIMA	
ART UNIT	PAPER NUMBER
4177	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/825,506	BOGGS ET AL.	
	Examiner	Art Unit	
	NIMA MAHMOUDZADEH	4177	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-11 and 13-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-11, and 13-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on November 19, 2007 has been entered. Claims 2 and 12 have been canceled. Claims 1, 3-11, and 13-20 are still pending in this application, with claims 1 and 11 being independent.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 11 and 13-20 are rejected under 35 U.S.C. 101 because the claimed inventions are directed to non-statutory subject matter.

The Examiner maintains the 101 rejection for the same reasons as stated in previous Office action due to the fact that "Logic" is being recited in lines 4 and 6 of claim 11 also, line1 of claim 18.

Claim Rejections – 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner maintains the 112 second paragraph rejection due to the fact that phrase "Time-moving average" is being recited in line 7 of claim 11.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 3, 6, 8-11, 13, 16, and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kline et al. (US Patent No. 4,456,788).

Regarding Claim 1, Kline et al. teach a method of managing deployed trunk circuit capacity, the method:

monitoring trunk circuits (Column 10, lines 60 – 63) to collect traffic usage data (Column 6, lines 65 – 68);

analyzing the traffic usage data (Column 6, lines 65 – 68) by averages of traffic usage data over a period of time (Column 11, lines 14 – 25); and

forecasting (Examiner's interpretation for forecasting is providing recommendation and perform changes in the trunks. Column 13, lines 6 – 13) trunk

circuit capacity requirements based at least in part on the averages (Column 11, line 14);

wherein the averages are computed (Column 2, lines 7-21) for a cluster of switches that is a community of interest with a locality of communication access pattern such that there is less communications traffic across a boundary between the cluster of switches and other switches not in the cluster than communications traffic between switches in the cluster (It is inherent that if cluster of switches are connected to each other Fig. 10).

Regarding claim 3, Kline et al. teach the method of claim 1, wherein the cluster comprises at least one switch (Abstract and column 2, lines 7 – 12 and Fig.1, switch 10) and trunk circuits (Abstract and column 2, lines 7 – 12 and Fig.1, trunk 11) to at least two other switches (Abstract and column 2, lines 7 – 12 and Fig.1, switch 10).

Regarding claim 6, Kline et al. teach the method of claim 1, wherein the averages (Column 11, line 14) are computed at least weekly (Column 11, line 21).

Regarding claim 8, Kline et al. teach the method of claim 1, wherein the forecasting (Examiner's interpretation for forecasting is providing recommendation and perform changes in the trunks. Column 12, lines 6 – 13) allows manual override (Column 13, lines 1- 6) of at least one model parameter.

Regarding claim 9, Kline et al. teach the method of claim 8, wherein the forecasting (Examiner's interpretation for forecasting is providing recommendation and perform changes in the trunks. Column 13, lines 6 – 13) uses a graphical (Column 11,

line 63) user interface (GUI) for entering the manual override (Column 13, lines 1- 6) of the at least one model parameter.

Regarding claim 10, Kline et al. teach the method of claim 1, wherein the forecasting (Examiner's interpretation for forecasting is providing recommendation and perform changes in the trunks. Column 13, lines 6 – 13) displays forecast output through a graphical (Column 11, line 63) user interface (GUI).

Regarding claim 11, Kline et al. teach a system that facilitates managing deployed trunk circuit capacity, the system comprising:

A data collector configured to monitor (Column 10, line 60) trunk circuits to collect traffic usage data (Column 6, line 67);

Data analysis logic configured to analyze the traffic usage data (Column 6, line 68) by computing averages of traffic usage data over period of time (Column 11, line 14); and

Forecasting logic configured to forecast (Examiner's interpretation for forecasting is providing recommendation and perform changes in the trunks. Column 13, lines 6 – 13) trunk circuit capacity requirements based at least in part on the time-moving averages (Column 11, line 14);

wherein the averages are computed (Column 2, lines 7-21) for a cluster of switches that is a community of interest with a locality of communication access pattern such that there is less communications traffic across a boundary between the cluster of

switches and other switches not in the cluster than communications traffic between switches in the cluster (It is inherent that if cluster of switches are connected to each other Fig. 10).

Regarding claim 13, Kline et al. teach the system of claim 12, wherein the cluster comprises at least one switch (Abstract and column 2, lines 7 – 12 and Fig.1, switch 10) and trunk circuits (Abstract and column 2, lines 7 – 12 and Fig.1, trunk 11) to at least two other switches (Abstract and column 2, lines 7 – 12 and Fig.1, switch 10).

Regarding claim 16, Kline et al. teach the system of claim 11, wherein the averages (Column 11, line 14) are computed at least weekly (Column 11, line 21).

Regarding claim 18, Kline et al. teach the system of claim 11, wherein the logic configured to forecast (Examiner's interpretation for forecasting is providing recommendation and perform changes in the trunks. Column 13, lines 6 – 13) allows manual override (Column 13, lines 1- 6) of at least one model parameter.

Regarding claim 19, Kline et al. teach the system of claim 18, wherein the logic configured to forecast (Examiner's interpretation for forecasting is providing recommendation and perform changes in the trunks. Column 13, lines 6 – 13) uses a graphical (Column 11, line 63) user interface (GUI) for entering the manual override (Column 13, line s 1- 6) of the at least one model parameter.

Regarding claim 20, Kline et al. teach the system of claim 11, wherein the logic configured to forecast (Examiner's interpretation for forecasting is providing

recommendation and perform changes in the trunks. Column 13, lines 6 - 13) displays forecast output through a graphical (Column 11, line 63) user interface (GUI).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kline et al. in view of Fitzgerald (US Patent No. 7,095,759).

Regarding claim 4, Kline et al. teach the method of claim 1, except wherein the traffic usage data comprises a metric that is based upon multiples of a base unit of

bandwidth. However, Fitzgerald teaches the traffic usage data comprises a metric that is based upon multiples of a base unit of bandwidth (column 3, line 53).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the traffic measurement features of Kline et al. to include the traffic usage data metric by multiplies of the base unit bandwidth taught by Fitzgerald in order to control the traffic on the trunk more efficient.

Regarding claim 14, Kline et al. teach the system of claim 11, except wherein the traffic usage data comprises a metric that is based upon multiples of a base unit of bandwidth. However, Fitzgerald teaches the traffic usage data comprises a metric that is based upon multiples of a base unit of bandwidth (column 3, line 53).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the traffic measurement features of Kline et al. to include the traffic usage data metric by multiplies of the base unit bandwidth taught by Fitzgerald in order to control the traffic on the trunk more efficient.

8. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kline et al. in view of "www.Erlang.com/whatis.html" (herein after Erlang)

Regarding claim 5, Kline et al. teach the method of claim 1, except wherein the traffic usage data comprises a metric that is based upon a count of a plurality of connections multiplied by a duration of each of the connections. However, Erlang teaches the traffic usage data comprises a metric that is based upon a count of a

plurality of connections multiplied by a duration of each of the connections (Page 1, line 16).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the traffic measurement features of Kline et al. to include multiplication of number of connections by duration of each connection taught by Erlang in order to get traffic usage data metrics for controlling the traffic on the trunk more efficient.

Regarding claim 15, Kline et al. teach the system of claim 11, except wherein the traffic usage data comprises a metric that is based upon a count of a plurality of connections multiplied by a duration of each of the connections. However, Erlang teaches the traffic usage data comprises a metric that is based upon a count of a plurality of connections multiplied by a duration of each of the connections (Page 1, line 16).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the traffic measurement features of Kline et al. to include multiplication of number of connections by duration of each connection taught by Erlang in order to get traffic usage data metrics for controlling the traffic on the trunk more efficient.

9. Claims 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kline et al.

Regarding claims 7 and 17, Kline et al. disclose the claimed invention except for computing plurality of forecasts using a plurality of models. It would have been an obvious matter of design choice to calculate forecast using multiple models, since applicant has not disclosed that having multiple calculation models solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with one or more calculation models.

Response to Arguments

10. Applicant's arguments with regards to claims 1 and 11 filed November 19 2007 have been fully considered but they are not persuasive.

On page 5 of the applicant's response, Applicant argued that Kline does not disclose grouping switches into clusters for the purposes of computing averages for the cluster. The Examiner respectfully disagrees. As disclosed on column 3, lines 2-15, Kline discloses that "The tandem node switches are interconnected by intermachine trunk 11. These tandem node switches are generally located at the customer's major locations and may also provide private automatic branch exchange (PABX) capability. Since the tandem node switch generally provides major tandem capability and serves the stations at major locations, these switches must have a capacity to serve thousands of stations and hundreds of trunks (intermachine, access lines, and off-net). Satellite PABXs 12 are homed to one or more tandem node switches by access lines 13. Traffic to locations not served by the network is called off-net traffic and is served by common carriers on the public networks. ". It is inherent that when cluster of switches are

connected to another cluster of switches, if a switch within a cluster want to communicate with another switch within the same cluster it is not going to utilize the trunk between two clusters but simply communicate within the cluster. This is why the traffic going through the trunk is limited to communication between two clusters of switches. Also, please see Fig. 10. In regards to average value, Kline discloses that "In one aspect of the invention, a telecommunication network has a plurality of tandem node switches interconnected by groups of trunks. Each switch generates trunk group management data which is transmitted to a network control center system where the data is stored and read. Days for which the average usage of a selected set of trunk groups exceeds a specified level are identified as data days."(Column 2, lines 7-14)

In regards to claims 3- 7, 8-10, and 13-20, Applicant argued the reference fails to teach the claimed invention based on the reasons as stated in the arguments of claims 1 and 11, Examiner respectfully disagree with the same reasons as discussed above.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wainwright (US Patent No. 5,488,715) teaches process for integrated traffic data management and network surveillance in communications networks

Allen, JR. et al. (US Patent Pub No. 2002/0093947) teach ATM-Based distributed virtual Tandem switching system

12. Any responses to this Office Action should be **faxed** to (571) 273-8300 or **mailed** to:

Commissioner for Patent
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nima Mahmoudzadeh whose telephone number is (571) 270-3527. The examiner can normally be reached on Monday - Friday 7:30am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benny Q. Tieu can be reached on (571) 272-7490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nima Mahmoudzadeh

Art Unit 4177

/Benny Q Tieu/

Supervisory Patent Examiner, Art Unit 4177